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NOTES ON QUEENSLAND ORCHIDACEAE, 2

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Summary

Two new species of *Orchidaceae* from Cape York Peninsula are described. These are *Cadetia collinsi* P. Lavarack sp. nov. and *Malaxis fimbriata* P. Lavarack sp. nov. *Peristylus banfieldii* (F.M. Bail.). P. Lavarack is a new combination based on *Habenaria banfieldii* F.M. Bail. *Habenaria anomala* Dockrill is a synonym of *H. xanthantha* F. Muell. and *H. ovoidea* R.S. Rogers & C.T. White is a synonym of *Peristylus candidus* J.J. Smith.

In the following, the type specimen has been cited only where it has been by the author.

Peristylus banfieldii (F.M. Bail.) P. Lavarack, comb. nov.
Habenaria banfieldii F.M. Bail., Qd Agric. J. 16:564 (1906); F.M. Bail., Comp. Cat. Qld. Plants:539, fig. 528. **Type:** North Kennedy District: Dunk Island, BRI 008612.

Until recently this species which was known only from the 'type' collection was placed in the genus *Habenaria*. Recent published work as exemplified by that of Seidenfaden (1977) has tended to confirm the existence of *Peristylus* as a separate generic entity. According to Seidenfaden the genus is characterized by 'an erect ovary rising close to the rachis, the caudicles of the pollinia very short without protruding protecting the cas of the anthers . . . . spur is shorter than the ovary and most often reduced to a more or less globular sac shorter than the petals'.

Recently the author made a collection of this species near Mareeba (Cook District: Ckewko, about 10 km south west of Mareeba, 1st Aug. 1979, *Lavarack* 3001; BRI 080730). This species is closely related to *P. goodyeroides* (D. Don) Lindl., differing in the smaller flowers and in the absence of a clearly defined triangular nectary at the entrance to the spur.

It was possible to record some of the data missing from the type specimen: Flowering period (for the Mareeba population) January — March. Habitat: permanently wet soil beside a small creek, in full sun. The plants have an oblong tuber 3—4 x 2—3 cm.

Peristylus candidus J.J. Sm., Fl. Buitenz. 6:36, Fig. 18 (1905); Seidenfaden, Orch. Genera in Thailand V: 60; Fig. 30 (1977).
Habenaria sumatrana (Schltr.) Schltr., Engl. Bot. Jahrb. 45, Beibl. 104:3 (1911); Holttum, Fl. Malaya 1:88, Fig 14a (1957); Dockrill, Aust. Indig. Orchids 1:50, 51 (1969).
Habenaria ovoidea R.S. Rogers & C.T. White, Proc. Roy. Soc. Qd 32:140-141 (1921); Dockrill, Aust. Indig. Orchis 1:32-33 (1969), *syn. nov.* **Type:** BRI 058344.

Careful comparison of the type of *H. ovoidea* with fresh material collected near Cardwell (*Lavarack* 3010; BRI 246783) and with the description and figures of *Peristylus candidus* by J.J. Smith and with the excellent figure quoted above by Seidenfaden have satisfied the present author that *H. ovoidea* is identical with *P. candidus*.

Habenaria xanthantha F. Muell., Fragm. Phyt. Aust. 7:16 (1869); Benth., Fl. Aust. 6:395 (1873); F.M. Bail., Qd. Flora 5:1591 (1902); Dockrill, Aust. Indig. Orchids 1:31-35 (1969); Rogers & White, Proc. Roy. Soc. Qd. 32:137-139 (1921). **Type:** MEL 89790-4.

Habenaria anomala Dockr., Orchadian 1:150-1 (1965); Aust. Indig. Orchids 1:30-31 (1969), *syn. nov.* **Type:** BRI 060247.

Dockrill (1969) made the comment in reference to *H. anomala* 'It is possible that it may prove to be merely a form of *H. xanthantha* F. Muell.' Some recent collections made near Cardwell in north Queensland have, in the opinion of the present author, confirmed this. A large population growing near Sunday Creek was examined and some plants fitting both the species in question were discovered. All the plants examined had very similar column structure but differences in the relative length of the stigmatophores were present. On careful examination of several inflorescences it was noted that these structures lengthen with age. Apart from this difference in the column, petals, sepals and vegetative parts of all plants collected were identical. The labellum varied with respect to the spur and the lateral lobes. All plants studied had a broad labellum of about constant length (3 x 7 mm). The spur ranged from totally absent to about 5 mm long with several specimens having a spur 0.5—1 mm in length. The length of the spur varied on individual flowers on a single plant, in one case 3 flowers had a small but definite spur while the other flower had no spur. The lateral lobes varied from long to short or absent with much variation evident among the flowers on each inflorescence.

Most of the flowers studied matched the description of *H. xanthantha* F. Muell. well except that in several cases the spur was 4 or 5 mm long instead of the stated 1—2 mm. One plant and one flower on another plant agreed well with the description of *H. anomala* Dockr. Some of the flowers seemed half-way between the descriptions of the two taxa as the spur was present, but only 0.5 mm long. (It is absent in *H. anomala*).

A careful comparison of the types of *H. anomala* and *H. xanthantha* indicated very little difference other than in the previously mentioned features of the labellum and spur. Both of these specimens would fit within the range of variation noted in the Cardwell specimens.

The presence of intermediate plants and flowers and the overall similarity of all plants studied (including the types) have lead to the conclusion that all the specimens observed represent one species, variable only in the labellum. This being the case, *H. anomala* Dockr. becomes a synonym of *H. xanthantha* F. Muell.

Cadetia collinsii P. Lavarack, species nova.

Planta epiphytica; caules 6—18 x 1.5—2.5 mm; folia ovata usque lanceolata 11—22 x 5—10 mm emarginata; bractea floralis 2 mm longa. Pedicellus circa 3 mm longus; ovarium 1.5 mm longum pilis confertis carnosis circa 0.5 mm longis obtectum. Sepala ovata alba 3 x 2.5 mm; petala linearia alba; labellum saccatum oblongum album 3—4 x 1.5—2 mm indistincte 3—lobatum calcari circa 1 mm longo; columna erecta 1.5—2 x 1—1.5 mm dentibus duobus prominentibus integris apiculibus pilis longis confertis carnosis. **Typus:** Cook District: Rocky River, Cape York Peninsula, 13°47'S 143°21'E, Sep 1975, *Lavarack* 1742 (BRI 244120, holotype).

Plant epiphytic forming small dense clumps. Stems 6—18 x 1.5—2.5 mm, consisting largely of a single internode, often enclosed for about half the length by the remains of a sheathing bract. Leaves 11—22 x 5—10 mm, ovate to lanceolate, emarginate, narrowing at the base to form a short petiole about 2 mm long. Flowers borne singly at the apex of the stem, floral bract about 2 mm long. Pedicel 3 mm long, ovary about 1.5 mm long covered with dense fleshy hairs about 0.5 mm long. Sepals ovate, white, 3 x 2.5 mm; petals linear, white 3 x 0.5 mm. Labellum oblong, 3— 4 x 1.5—2 mm with a spur about 1.5 mm long, white, lateral lobes very small, disc sparsely and minutely pubescent. Column erect 1.5—2 x 1—1.5 mm with 2 prominent purple apical teeth extending above the anther, sparsely and minutely pubescent below the stigma. Stigma approximately square, about 0.8 mm across. Anther white with a short, broad rostrum, lower part of pollinia projecting over the upper part of the stigmatic surface. Capsule globose, 2—3 mm in diameter covered with long fleshy green hairs.

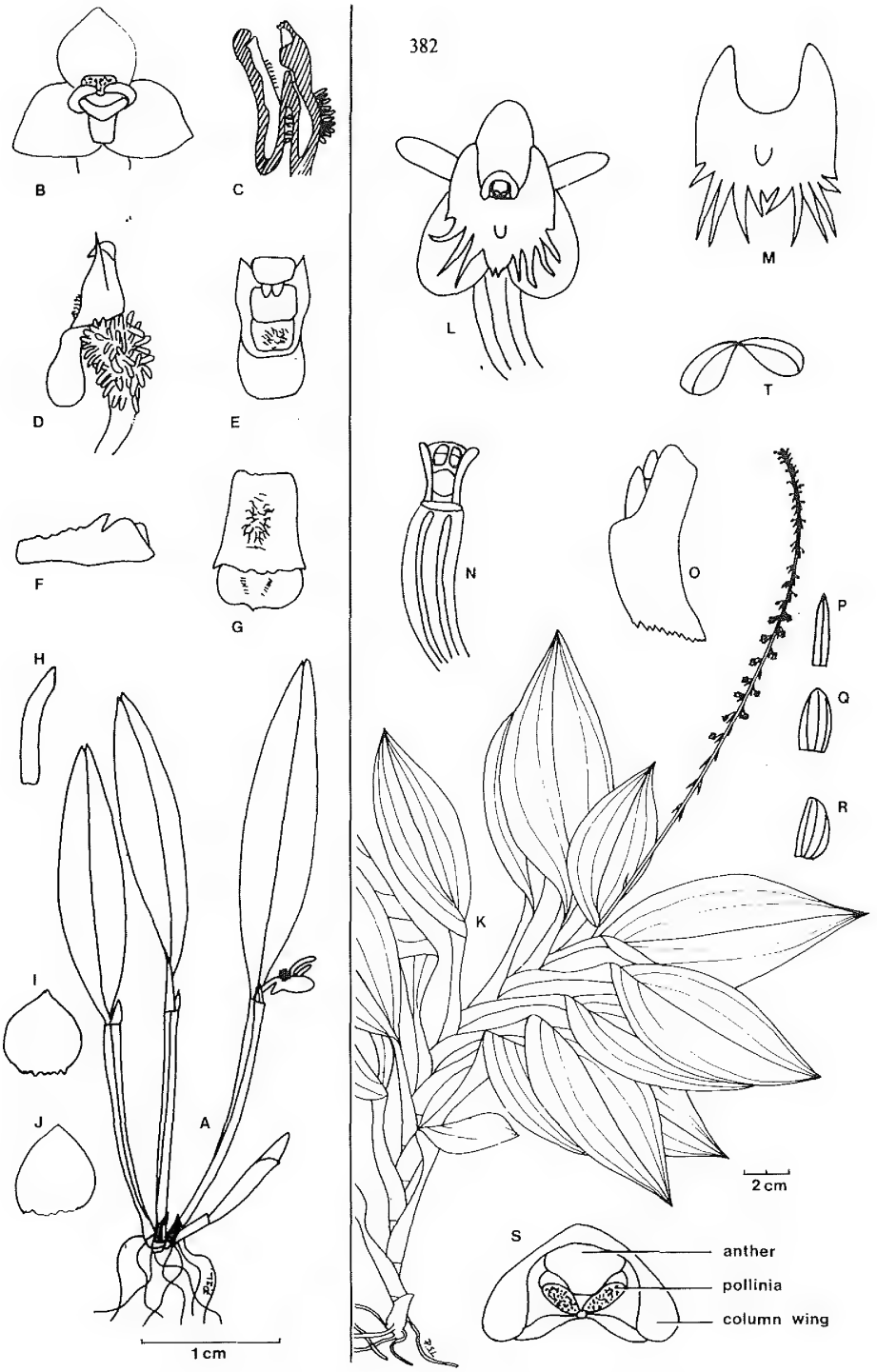

Figure 23. (a) *Cadetia collinsii* P. Lavarack sp. nov. **A.** Plant. **B.** Flower **C.** Section through flower. **D.** Flower from side, petals, sepals, and part of labellum removed. **E.** Column from front. **F.** Labellum from side. **G.** Labellum flattened out. **H.** Petal. **I.** Dorsal Sepal. J. Lateral sepal (**A** to indicated scale, **B-J** to various scales)

Figure 23 (b) *Malaxis fimbriata* P. Lavarack sp. nov. **K.** Plant. **L.** Flower from front. **M.** Labellum. **N.** Column and ovary **O.** Column from side. **P.** Petal. **Q.** Dorsal Sepal. **R.** Lateral sepal. **S.** Column from above. (**K** to indicated scale, **L-S** to various scales).

On examination of some unopened buds it was found that the pollinia were fused to the stigmatic surface. This, allied to the high incidence of fertilisation suggests that most, if not all, flowers are autogamous. *Cadetia collinsii* resembles *C. maideniana* (Schltr.). Schltr. but is smaller in all its parts and differs in the following features:

The labellum in *C. maideniana* has a thick fleshy midlobe, the apex being concave; while in *C. collinsii* the midlobe is only slightly fleshy and the apex is rounded with a small blunt point. The lateral lobes of the labellum are more pronounced in *C. maideniana* than in *C. collinsii.* The apical teeth on the column in the former is more slender than that of the latter. There are also differences in the shape of the sepals, all three being nearly equal in *C. collinsii,* giving the flower an almost regular appearance, while the lateral sepals differ from the dorsal in *C. maideniana* giving the flower a strongly zygomorphic appearance.

C. collinsii has been observed in the gorges of the Rocky River, Chester River and Leo Creek and in a gorge on the Janet Range about 100 km to the north. It is a plant of lowland creek gorges usually growing low down on trees in at least partial shade. The flowering period is spasmodic, but largely in December to April.

C. collinsii is named in honour of Rev. R. Collins of Atherton, who encouraged the author in his early studies of Australian orchids, and more recently, assisted on field trips to Cape York Peninsula, actually being present when this orchid was first officially collected.

Malaxis fimbriata P. Lavarack, species nova.

Planta terrestris, caules decumbentes teretes 20 x 1 cm; folia 4—15; petiolus canaliculatus vaginans 2.5—5 cm longus; lamina elliptica acuminata 7—12 x 3—5 cm. Inflorescentia 10—25 cm longa purpurea e floribus numerosis constans; pedicellus 7—10 mm longus ovario inclusus reflexus. Sepalum dorsalis 2.5—3 x 1—1.5 mm ovatum; sepala lateralia 2—2.5 x 1.5 mm oblonga obtusa; petala 2.5—3 x 0.5 linearia; labellum 2.5—3 x 3.5—4 mm hippocrepiforme 8—12 dentibus prominentibus, pari medio brevi latoque 0.2—0.5 mm longo vel prominentiis brevis redacto et utrinque dentibus aliis angustis acutis 0.4—1.2 mm longis ultra labelli apicem extensis praeditum. Columna 1 x 0.8 mm alis latis obtusis ultra anther. **Typus:** COOK DISTRICT: Leo Creek, Cape York Peninsula, 13°33'S 143°28'E, Feb 1977, *Lavarack* 1768 (BRI 244121, holotypus). Collected Sep 1975, flowered in cultivation, Feb 1977.

Stems decumbent with the new shoots arising fromthe apical half of the previous stem, up to 20 cm long and 1 cm in diameter, terete, partly covered with scarious bracts and the remains of the old leaves. Leaves 4—15 on each stem, petiolate; petioles channelled, sheathing at the base 2.5—5 cm long; lamina 7—12 x 3—5 cm elliptical, broadest at the middle, acuminate, with 5 prominent veins. Infloescence terminal, 10—25 cm long, rachis about twice the length of the peduncle; rachis and peduncle purple, 1.5—3 mm diameter, fluted; bracts on the peduncle about 5—7, reflexed, 5 x 1 mm; floral bracts similar; rachis with numerous densely packed flowers; pedicels 7—10 mm including ovary, reflexed. Flowers about 4 mm diameter, purple in all parts. Dorsal sepal 2.5—3 x 1.5 mm ovate obtuse; lateral sepals 2—2.5 x 1.5 mm, oblong, obtuse; petals 2.5—3 x 0.5 mm linear, at first spreading, later reflexing as the flower ages. Labellum 3 x 4 mm, horseshoe shaped, the apical and near apical margins with 8—12 prominent teeth, the central pair of teeth short and broad 0.2—0.5 mm long or reduced to a pair of small points on either side of a V-shaped notch; lateral teeth occupying about 1/3 of the lateral margin, 3—5 on each side, narrow, acute, 0.8—1.2 mm long; the pair of teeth furthest from the apex much shorter, the longest of the lateral teeth extending beyond the apex of the labellum; auricles triangular, obtuse, 1.5 x 1 mm. Surface of mid part of labellum slightly concave. Column short and broad, about 1 x 0.8 mm, with 2 broad and blunt wings extending above the anther. Stigma approximately square. Anther small, 0.5 x 0.5 mm, broadly triangular. Capsule 5—8 mm long.

This species appears to be related to *M. decumbens* (Schltr.) P.F. Hunt from New Guinea, but differs in having much larger leaves and a relatively larger labellum with.

teeth exceeding the apex of the labellum. The differences between several species, mostly described by J.J. Smith and by R. Schlecter from the Indonesian Islands and the islandof New Guinea, appear to be quite slight and it is obvious that this genus is in need of revision. Taking this into account, *M. fimbriata* appears at least as discrete an entity as many of the species previously described, differing in a combination of features involving the plant habit, length of pedicel and shape and ornamentation of labellum. According to Schlechter (1911-1914) it would fit in the section *Commelinodes.*

M. fimbriata may be distinguished from other members of the genus within Australia by the decument habit, evergreen leaves and purple flowers.

This plant has been observed in a small area on the catchments of Leo Creek, Pandanus Creek and the Peach River above 500 m altitude. It grows in leaf litter on hillsides or on large rocks in dense shade on the rainforest floor forming large clumps. Flowering time is January to March.

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